FTBF USER GUIDE
May 27, 2010

Once a test beam experiment has been approved and have an MOU signed by the Fermilab division heads and directorate, the experimenters are allowed to set up their apparatus in the Test Beam area, after scheduling such with the test beam coordinator. To obtain beam time, the experiment also has to schedule it with the test beam coordinator.

This memo contains important information on how an experimental group can operate at Fermilab and use the test beam. The spokesperson is the official contact and is responsible for forwarding this information to the rest of the group, arranging for their training and getting the necessary approvals for the experiment to run.

1. Housing and Living Conditions near or at Fermilab

This is a web link to maps of Fermilab and directions:
http://www.fnal.gov/pub/visiting/hours/index.html

Onsite housing information can be found at the following web site, although this housing is usually oversubscribed:
http://bss.fnal.gov/accommodations/generalinfo.html

Offsite housing options: PDF

2. Obtaining a Fermilab ID

To work in the Meson Test Beam area, every user in the group needs to have a Fermilab ID. The application can be obtained from the website: http://wdrs.fnal.gov/users/VisitorIDApp.pdf

Requirements for a visitor ID that can be handled from offsite include watching the safety video at:http://vmsstreamer1.fnal.gov/VMS_Site_02/Training/UserSafety/UserSafety.htm and reading and signing the Fermilab Policy on Computing at:http://computing.fnal.gov/cd/policy/cpolicy.pdf

When the members of the group come to Fermilab, either the spokesman or the test beam manager will sign the application form and bring it to the User's Office on the 1st floor, after which the user will be sent to the ID office on the ground floor. Foreign users must bring their visa and passport. All users must have health insurance information.

3. Accessing the Computing Network

To allow computers brought onsite to access the network, they must be registered first. Starting up a browser window will bring up a temporary registration site that will allow a user access until midnight each day. This can be renewed several days in a row. If the computer will be used onsite for more than 5 days, then it needs to be registered permanently.

Instructions for doing this are on the temporary registration site. Here is a FAQ for the DHCP registration process: http://fndcg0.fnal.gov/dhcp-faq.htm

For more information on Computing at Fermilab see the Computing Division's website: http://computing.fnal.gov/xms/Services/Getting_Started/Introduction_to_Computing_at_Fermilab/Getting_Started_as_a_Non-Employee_Off-site_User

4. Obtaining Training

To work at the Test Beam Facility, each member of the group needs to have some form of radiation safety training. If a user is not going to make accesses into a secured beamline, then GERT (General Employee Radiation Training) is adequate. (When the beamline is in open access, a GERT trained user can access there.) If a user wants to make an access into a secured beamline, then Radiation Worker Training and Controlled Access training are required. These can be scheduled by going to the web site (onsite access only): http://www-esh.fnal.gov/pls/default/class_sched.html or by calling Joel Kofron at (630)-840-8444 or emailing him at kofron@fnal.gov.

We STRONGLY advise arranging for this training well in advance of the scheduled beam running. In addition, each member of the group will need a radiation monitoring badge. This can be obtained by filling out the information in the website: http://www-esh.fnal.gov/pls/default/tld_requests.html then picking up the badge in the Communications Office on the ground floor. The test beam manager can sign for any permissions on these forms.

5. Working at the Test Beam Facility

The Test Beam Facility is located on the west side of the Meson Detector Building. Users must have a Fermilab ID and at least GERT training to work there. It is also highly recommended to have at least two people working at any given time during installation.

There must be a person in the control room for beam to be delivered. This is so the MCR can contact the group for information, and insure the test apparatus is not accidentally damaged by the beam. You can leave the facility unattended, but you MUST insure the beam be stopped during that time. There are restrooms and modest kitchen facilities and enough space for many people to work simultaneously. Much of the information about the facility can be found at the web site: http://www-ppd.fnal.gov/MTBF-w

6. Installing and Inspecting the Equipment

If a user needs assistance in installing equipment (i.e. rigging, forklift, craning, etc.) they should contact the coordinator in advance, who can arrange for and schedule this installation.

Once the equipment has been installed in the beamline, it needs to be approved by the Particle Physics Division Safety Committee before turning it on unattended. The enclosures will also need to be inspected by the Accelerator Division Radiation Safety Officer before users can

request beam. All equipment should be installed at once (if possible), necessitating only one ORC review.

The Test Beam Coordinator will contact the PPD Committee Chairman (currently Leo Bellantoni, bellanto@fnal.gov), and the AD RSO, and arrange a time for inspecting the equipment. The committee members will give their email approval to the Chairman, who will arrange for a signed 'Operational Readiness Clearance' document.

Once an ORC is obtained, then the experiment is free to actually take beam. More information about this review can be found on our safety page at: http://www-ppd.fnal.gov/MTBF-w/Safety.html

Again, arranging for this inspection well in advance is **STRONGLY** recommended.

7. Receiving Beam

To receive beam, the MT6 enclosures need to be searched and interlocked. Contact the Main Control Room (MCR) at x3721 to request a Search and Secure. The experiment should call in only after you are reasonably certain you won't need to open up the enclosures again for a while. A call to the MCR will then start the chain of events resulting in beam. It should be relatively transparent to the group, but good communication techniques are highly recommended (i.e. telling the MCR exactly what is wanted and asking them specifically how long they think it will take). You can see what is going on at the MCR by accessing their ELog page at: http://www-bd.fnal.gov/cgi-mcr/elog.pl?scroll=true (on site only)

If specific test beam tuning is required, experts will be called in and you can follow their notes in the External Beams eElog athttp://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=xb10 (on site only)

More generally, you can get an idea of the plan for the next day or so at the Run Coordinator's Elog: http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=runco (on site only). HEP Shot Set-up times are also posted in this elog.

Currently, the allowed test beam hours are from 4 a.m. to 6 p.m, (0400-1800). During that period there will often be interruptions to service due to the other aspects of the Fermilab program. If those interruptions impact the ability to complete the experiment, users can request extended running hours from the test beam coordinator, **only**, which may or may not be granted by the run coordinator and head of Program Planning. If an experiment does not take advantage of the hours that are assigned (ie. start at 0400), it is unlikely they will be granted extended running. It is best to request extra running as soon as you realize you will need it. The sooner the coordinators know of your request the easier it is to schedule it.

It is crucial someone be at the test beam control room anytime beam is being delivered. This is so the MCR can contact the group for information, and ensure the test apparatus is not accidentally damaged by the beam. You can leave the facility unattended, but you MUST insure the beam be stopped during that time.

8. Monitoring the Beam

To see the beam making it into the facility, the beam profile monitors can be accessed on the ACNET terminals on page S45, then selecting the chambers you want to look at and plotting them. Scintillator counts for the time-of-flight and Cerenkov systems can be found on ACNET page S17.

Someone must be in the test beam control room while beam is being delivered. Monitoring the beam is important to insure the experiment apparatus is not accidentally damaged by the beam. You can leave the facility unattended, but you MUST be sure the beam is stopped during that time.

9. Making Controlled Accesses

Each group will have a small number of controlled access leaders (CAL's). They will be specifically trained by one of the test beam managers to insure they understand the specific procedures for accessing the beamline areas. These CAL's will be responsible for insuring the group members follow the two-person system and one-person/one-key rules, and for coordinating accesses between groups if there is parasitic running taking place. These leaders are the only ones allowed to call the MCR and request a controlled access.

To make controlled accesses into the beamline, the CAL needs to call the MCR from the appropriate gate, and they will remotely open the key tree for you. Signing in on the time sheet is required. The CAL does not have to actually be part of the access team. Remember to follow the controlled access procedure, or you will drop the interlocks and will need to re-secure the area. Too many times accidentally dropping the interlocks may lead to a slower response from the MCR.

It is crucial someone be at the test beam control room anytime beam is being delivered. This is so the MCR can contact the group for information, and insure the test apparatus is not accidentally damaged by the beam. You can leave the facility unattended, but you MUST insure the beam be stopped during that time.

10. Open Access

Open access means the interlocks are dropped and anyone can access the enclosures with close-toed shoes. Training other than GERT is not necessary, nor is dosemetry. Persons who do not have GERT must be escorted at all times. Signing in is not required.

To open the enclosures a user must have the permission of either the primary running experiment, or the Test Beam Coordinator.

- Call the MRC, x3723 from the key tree of the enclosure you wish to open. Tell them where you are and request to go into open access.
- They will remotely open the key tree for you.

- Take a key from the keytree and open the door you are standing next to, the operator will watch you from the camera.
- Once the door is open and the interlocks are dropped replace the key in the keytree, and shut the door.

You are now in Open access.

If the Interlocks are dropped accidentally, you must call the MCR immediately and inform them of what happened. Then request a secure, or use the exact phrase "We would like to go into Open Access now." You must use this exact phrase even if the MCR calls you.

The test beam managers can be reached at the following:

Test Beam Manager and Coordinator:

Aria Meyhoefer	Email:	aria@fnal.gov
Fermilab	Phone:	630.840.4463
MS 122		
P.O. Box 500	Cell:	815.970.4652
Batavia, IL 60510		

Deputy Manager:

Doug Jensen	Email:	djensen@fnal.gov
MS 221	Phone:	630.840.8194
	Cell:	630.254.4237